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Application No.	091759,781	Prepared by	JS
Examiner-GAU	Langer - 1754	Date	7/28/04
		No. of queries	1
		Tracking Number	5980539
		Week Date	7/12/04
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|----------------------|------------------------|--------------------|----------------|
| a. Serial No. | f. Foreign Priority | k. Print Claim(s) | p. PTO-1449 |
| b. Applicant(s) | g. Disclaimer | l. Print Fig. | q. PTOL-85b |
| c. Continuing Data | h. Microfiche Appendix | m. Searched Column | r. Abstract |
| d. PCT | i. Title | n. PTO-270/328 | s. Sheets/Figs |
| e. Domestic Priority | j. Claims Allowed | o. PTO-892 | t. Other |

SPECIFICATION	MESSAGE
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Applicant(s)

Rau et al

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U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A1	3,511,595	5/12/70	Fuchs	23	4	
	A2	3,660,023	5/2/72	Frevel et al	23	150	
	A3	3,883,639	5/13/75	Cronkright et al	423	247	
	A4	3,988,422	10/26/76	Kruger	423	232	
	A5	4,160,810	7/10/79	Benson et al	423	220	MAY 17 2001
	A6	4,187,279	2/5/80	Rimpi	422	185	TC 1700
	A7	4,247,525	1/27/81	Voeste	423	242	
	A8	4,272,498	6/9/81	Faatz	423	242	
	A9	4,367,258	1/4/83	Lagana et al	423	221	
	A10	4,376,101	3/8/83	Sartori et al	423	223	
	A11	4,376,102	3/8/83	Thaler Et al	423	223	

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
							YES	NO
	B1	WO9825688	6/18/98	European patent	B01D53	62		
	B2	GB2284203	5/31/95	United Kingdom	B01D53	62		
	B3	EP 487102	5/27/92	EPO	B01D53	34		
	B4	GB819215	9/2/59	Germany	55	2		
	B5	GB1305718	2/7/72	United Kingdom	B01D53	34		

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

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	A12	4,405,578	9/20/83	Sartori et al	423	223	
	A13	4,496,371	1/29/85	Urban et al	48	197	
	A14	4,510,124	4/9/85	Sears et al	423	437	
	A15	4,708,855	11/24/87	Morrison	423	234	
	A16	4,716,027	12/29/87	Morrison	423	245	17001
	A17	5,006,323	4/9/91	Johnson	423	244	17001
	A18	5,059,406	10/22/91	Sheth et al	423	244	1700
	A19	5,100,633	3/31/92	Morrison	423	225	
	A20	5,192,518	3/9/93	Ukawa et al	423	244.08	
	A21	5,261,490	11/16/93	Ebinuma	166	266	
	A22	5,429,808	7/4/95	Kuroda et al	422	176	

FOREIGN PATENT DOCUMENTS

REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO
B6	WO9855210	12/10/98	European patent	B01D53	62		

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EXAMINER INITIAL	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
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C2	"Mitigation of CO ₂ by Chemical Conversion: Plausible Chemical Reactions and Promising Products", A. A. Miodownik and J.A. Moulijn, published in Energy and Fuels, Vol. 10, No. 2, p 305-325, dated 1996
C3	"The Fixation of Carbon Dioxide in Inorganic and Organic Chemicals", M. Aresta, published in Energy Conversion and Management, Vol. 34, No. 9-11, p. 745-752, dated 1993
C4	"The Carbonate-Silicate Geochemical Cycle and its Effect on Atmospheric Carbon Dioxide Over the Last 100 Million Years", R.A. Berner, A.C. Lasaga, and R.M. Garrels, published in American Journal of Science, Vol. 283, p 641-683, dated September 1983
C5	"Marine Carbonate Formations: Their role in Mediating Long-Term Ocean-Atmosphere Carbon Dioxide Fluxes - A Review", C.N. Murray and T.R.S. Wilson, published in Energy Conversion and Management, Vol. 38, Suppl., p. S287-S294, dated 1997
C6	"Multiple timescales for neutralization of fossil fuel CO ₂ ", D. Archer, H. Keshgi, and E. Maier-Reimer, published in Geophysical Research Letters, Vol. 24, No. 4, p. 405-408, dated February 15, 1997
C7	"CO ₂ Fixation by Artificial Weathering of Waste Concrete and Coccolithophorid Algae Cultures", H. Takano and T. Matsunaga, published in Energy Conversion Management, Vol. 36, No. 6-9, p 697-700, dated 1995
C8	"Evaluation Strategies for Chemical and Biological Fixation/Utilization Processes of Carbon Dioxide", T. Kojima, published in Energy Conversion Management, Vol. 36, No. 6-9, p 881-884, dated 1995
C9	"Absorption and Fixation of Carbon Dioxide by Rock Weathering", T. Kojima, A. Nagamine, N. Ueno and S. Uemiya, published in Energy Conversion Management, Vol. 38, Suppl., p S461-S466, dated 1997
C10	"Carbon Disposal in Carbonate Minerals", K.S. Lackner, C.H. Wendt, D.P. Butt, E.L. Joyce, D.H. Sharp, published in Energy, Vol. 20, No. 11, p 1153-1170, dated 1995
C11	"Progress on Binding CO ₂ in Mineral Substrates", K.S. Lackner, D.P. Butt, and C.H. Wendt, published in Energy Conversion and Management Vol. 38, No. 11, p S259-S264, dated 1997
C12	"CO ₂ Recovery From Flue Gas by an Ecotechnological (Environmentally Friendly) System", T. Chohji, M. Tabata, and E. Hirai, published in Energy, Vol. 22, No. 2/3, p 151-159, dated 1997

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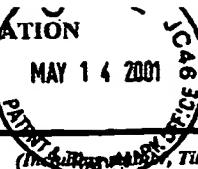
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C13	"Sequestering Atmospheric Carbon Dioxide by Increasing Ocean Alkalinity", H. Kheshgi, published in Energy, Vol. 20, No. 9, p. 915-922, dated 1995
C14	H. N. Soud and M. Takeshita, FGD Handbook, Second Edition, IEA Coal Research, London, chapter 3, p. 25-43, dated January 1994
C15	"Geochemistry of Sedimentary Carbonates", Elsevier Science Publishers, p. 1-10, 72-86, dated 1990
C16	"A Continuous and Mechanistic Representation of Calcite Reaction-Controlled Kinetics in Dilute Solutions at 25°C and 1 Atm Total Pressure", T. Arakaki and A. Mucci, published in Aquatic Geochemistry, Vol. 1, p 105-130, dated 1995
C17	"CO ₂ Capture, Reuse, and Storage Technologies for Mitigating Global Climate Change", Herzog et al, White Paper, p 34, dated January 1997
C18	"A Geological Perspective on Global Warming and the Possibility of CO ₂ Removal as Calcium Carbonate Mineral", Dunsmore, Energy Conversion Management, Vol 33, No. 5-8, p 565-572, dated 1992
C19	"Carbon Sequestration - State of the Science", Working paper for roadmapping future carbon sequestration R&D, U.S. DOE Office of Science/Office of Fossil Energy, dated February 1999, p 3-13 to 3-16
C20	IEA 2000 "Capture of CO ₂ Using Water Scrubbing", International Energy Agency, Gloucestershire, UK. pg. 2-4 and 2-5 describes work of Rau and Caldeira
C21	U.S. Dept. of Energy report, 1999. Carbon Sequestration Research and Development. U.S. Dept. of Energy, Wash., D.C, page 3-14
C22	Wong, C.S. and S. Hirai. 1997. Ocean Storage of Carbon Dioxide - A Review of Oceanic Carbonate and CO ₂ hydrate Chemistry. International Energy Agency, Cheltenham, UK. pg. 54-58
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C24	Smith, H.J. 2000. Ocean Dumping of CO ₂ . Science 287: 769

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C25	Golomb D. 1997. A fizz-sics solution. Use limestone to cure lake's CO ₂ problem, Physics Today 50 (2): 15-15	TC 1700
D1	Rau and Caldeira, I Science and Technology Review, December 1998, entitled "Energy To Keep Everything Running"	
D2	an abstract entitled "Geochemical implications of the carbonate-dissolution method for ocean disposal of carbon dioxide" describing this invention was presented by one of the inventors at the "Second International Symposium on CO ₂ in the Ocean" conference January 18-22, 1999 in Tsukuba, Japan	
D3	Rau and Caldeira, Lawrence Livermore National Laboratory (LLNL) report UCRL-JC-132228. Entitled "Enhanced Carbonate Dissolution: A Means of Sequestering Waste CO ₂ as Ocean Bicarbonate". It was catalogued by the LLNL library on March 15, 1999, also published in Energy Conversion and Management, vol. 40, 1999, pp. 1803-1813.	
D4	Nojiri, Y. 1999. Proceedings of the 2nd International Symposium: CO ₂ in the Oceans. National Institute for Environmental Studies, Tsukuba, Japan. pg. 429	
D5	Rau and Caldeira, Geophysical Research Letters, January 15, 2000, Vol. 27, No. 2, entitled "Accelerating carbonate dissolution to sequester carbon dioxide in the ocean: Geochemical implications", pp.225-228	
D6	Rau, G.H. and K. Caldeira. Enhanced carbonate dissolution as a means of sequestering carbon dioxide in the ocean. Transaction, American Geophysical Union 80(49): 213, December 7, 1999	
D7	Rau, G.H., B. Downs, K. Caldeira, and H. Sarv. Enhanced carbonate dissolution as a means of sequestering carbon dioxide in the ocean. Transaction, American Geophysical Union 81(48): 283, November 28, 2000	
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